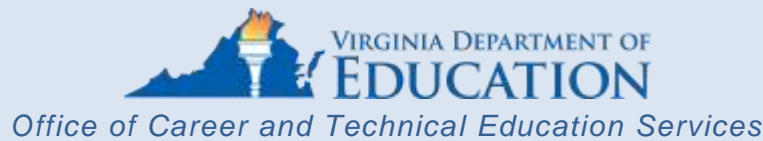


# Governor's STEM Academy Brief



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The purpose of this monthly brief is to provide information, resources, and a networking vehicle to support the STEM (science, technology, engineering, and mathematics) Academies in Virginia.

## GOVERNOR'S STEM ACADEMIES SPOTLIGHT

The Governor's Career and Technical Academy in Arlington recently graduated two seniors who will pursue engineering degrees. One student completed his Federal Aviation Administration's Private Pilot ground school requirements and earned a certified credit for graduation. This year, the same student earned his AutoCAD certification in computer-aided drafting and seven dual-enrollment credits in engineering drawing before heading to Drexel University for the Honors Engineering program. This year another student earned an AutoCAD certification and seven Northern Virginia Community College credits for engineering drawing before enrolling in Mechanical Engineering at Virginia Commonwealth University.

## CAREER LINKS—TRANSPORTATION, DISTRIBUTION AND LOGISTICS

- To investigate careers in transportation, logistics, and distribution, visit [Jobs In Logistics](#), [Junior Achievement](#), Glencoe's [Career Clusters Series](#), McGraw Hill's [College and Career Readiness](#), [Transportation and Warehousing](#) from the Bureau of Labor Statistics, Minnesota's [iseek careers](#) (military training opportunities), and [Virginia Career VIEW](#).
- [Crosswalking Occupations to Career Clusters](#) explains how new employment projections are matched to Career Clusters.
- The U.S. Federal Aviation Administration site includes [Airman Knowledge Test Questions](#) for many aviation-related occupations.
- Explore [Inbound Logistics](#) for case studies and commentaries on issues and challenges facing the logistics industry, as well as [Smart Moves](#) for students considering a career in logistics and related fields.

## GRANTS AND OPPORTUNITIES

- [Virginia Tech's](#) spring magazine offers exciting glimpses into how they are providing opportunities for "Full STEM ahead—Educating the Next Generation's Brightest Minds."
- The National Ford/AAA Auto Skills Competition was held recently at the Ford World headquarters in Dearborn, MI. The Fauquier High School team took second place in the competition which featured teams from all 50 states. Congratulations team and advisor Scott Freeman.
- Governor Bob McDonnell recently announced the development of the [Commonwealth's first modeling and simulation](#) strategic plan. The plan is being developed to identify modeling and simulation assets and capabilities and to jumpstart collaboration and market development across Virginia. Virginia's Secretaries of Technology, Commerce and Trade, Education and Veterans Affairs and Homeland Security are leading the effort. All Virginia scientists, practitioners and companies that develop or use modeling and simulation applications or technologies are encouraged to participate.

- A Chantilly Academy student returned home as a silver medalist from the Automotive Refinishing Technology competition at the SkillsUSA 49th annual National Leadership and Skills Conference in Kansas City, Missouri recently. Congratulations to the student and to advisor Kenny Brown.
- High-school students who participated in the recent [Peninsula K-Next! summer camp](#) in Hampton visited local manufacturers and engaged in project-based learning. Mentors from local businesses, such as Newport News Shipbuilding, worked closely with students during the program, which seeks to teach students about manufacturing careers and entrepreneurship.
- The [STEM Equity Pipeline](#) provides resources, professional development opportunities, training modules, and news.

## INSTRUCTIONAL STRATEGIES

- The U.S. Department of Transportation took a leadership role in the creation of the National Transportation, Distribution and Logistics Career Cluster. Today they are partnering with the National Association of State Directors of Career Technical Education by sponsoring the development of [Careers in Transportation Curriculum Materials](#).
- The [Massachusetts-based Education Development Center](#) is launching the Oceans of Data Institute to develop curriculum materials, conduct research and train teachers in the ways that Big Data can be infused into classroom lessons. "The increasing availability of digital, sharable data presents a huge opportunity for society to answer whole new kinds of important questions," said research scientist Ruth Krumhansl, who will direct the institute.
- <http://www.vmasc.odu.edu/demos/visport/home> gives students the opportunity to experience what ports are all about while they explore the inner workings of a port, check out the many port career opportunities, and operate port equipment through the simulations.
- Visit [Transportation Careers](#) for [problem-based scenarios](#) and [lesson plans](#) with [correlations](#) between those scenarios and related Virginia CTE courses.
- The [Ohio Resource Center](#) provides transportation-related lesson plans.
- Explore modules of the [Intermodal Transportation Curriculum for Secondary Education](#) at the University of Southern Mississippi.
- Several [scenario-based activities](#) for the Transportation, Distribution, and Logistics Career Cluster are included on the [Adult Career Pathways Training and Support Center](#) Web site.
- Browse the Transportation Research Board site for [current downloadable PDF publications](#), such as [How to Increase Bicycling for Daily Travel](#); [A Toolkit for Accelerated Bridge Construction](#); [Environmental Optimization Aircraft Departures: Fuel Burn, Emissions, and Noise](#); and [A New Direction: Our Changing Relationship with Driving and the Implications for America's Future](#).
- The American Association of Port Authorities offers resources including [U.S. Government Relations & Policy Issues](#).
- [Air Transport World](#) includes articles and other resources on topics including Technology, Aeropolitics, Eco-Aviation, and Data and Research.
- The U.S. Small Business Administration offers a [Business Guides by Industry](#) for laws and regulations pertaining to the transportation and logistics industry, among others.
- The [U.S. Department of Transportation](#) offers resources on topics including [High Speed Rail](#), [Automobiles](#), [Aviation](#), [Public Transit](#), [Maritime and Waterways](#), and [Intelligent Transportation Systems: Application Areas](#)

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